



Craspedia PAINTBALL™

Cultivation Protocol

Prepared for Express Seed Company, USA
| July 2022

Botanical Background

- Origin: New Zealand, Australia
- Family: Asteraceae
- Genus: *Craspedia*, (comprised of 23 species)
- Species: *Craspedia globosa*
- Type of flower: Capitulum (a cluster of flowers)
- Propagation: from cuttings



PAINTBALL™ POP

Cultivation overview

- Craspedia **PAINTBALL™** can be grown in open field or in well ventilated tunnels or greenhouses
- Can be planted year-round preferably in moderate temperatures
- Flowers in one continuous flush
- Harvest begins 3 to 4 months after planting and continuous for 3 to 4 months
- The flush ends once temperatures get too high (over ~ 32°C, 90°F)
- Difficult to achieve 2nd flush after hot season



Before Planting

- **Beds:** 1 meter (3.3') wide, 30cm (~12") high, with 50cm (~1'8") paths between beds
- **Irrigation system:** 2-3 drip lines along each bed, with 0.3 to 0.5 GPH drippers every 8"
- **Disinfect** soil before planting (crop is *Fusarium* sensitive)



Planting

- Disinfect soil before planting
- **Planting density:** 8 to 10 plants per net **11 sq. ft of bed** (1 m²), 20,800 to 26,000 plants in a gross Acre
- This is done by planting in two rows along each bed with 8" to 10" spacing between plants



Support nets

- Placing two to three nets is recommended:
 - One of 8"×8" squares at ~ 10" above ground level
 - The additional two of 12"×12" squares at ~ 1'10" and 2'10" above ground level



Pinching

- Pinching is done at the base of the central stem, once it arises from the foliar base
- The low pinch induces new shoots to arise and thus can sustain a longer period of harvest
- When planted late for the flowering season, pinching can be skipped



Irrigation

- **Establishment stage:** Apply both overhead irrigation (~ 1,000 cu.ft per acre per day) and drip irrigation (~ 285 cu.ft/acre/day) containing fertilizer
- **Elongation stage:** Apply 720 to 860 cu.ft/acre/day in the hot season, and 290 to 430 cu.ft/acre/day in the cold season



Fertilization

- Best results are achieved when fertilizing regularly via the irrigation system
- The NPK rates should be determined according to the growth stage of the plant:

Stage	Period (days)	K (ppm)	P (ppm)	N (ppm)
Establishment and Development	20-30	100	20-30	100-150
Elongation of stems	20-50	120-170	20-30	120-170
Flowering	20-50	150	20-30	100

Plant development

Growth is vigorous and uniform, with no specific requirements for inducing flowering



Harvest

- Opening of the flowers starts from bottom to top
- Harvest when about one third (1/3) of the flowers in the cluster are open
- Average yields are 480K to 600K stems per acre per year



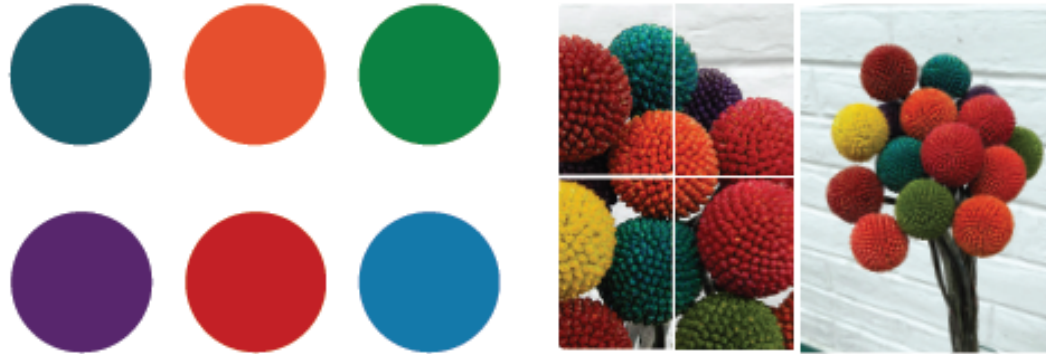
Post - Harvest

- After harvest place stems in water with bactericide
- Sorting can be done with automation



Tinting by Immersion

By using immersion, you can achieve deep colors like red, green and blue



How to tint by **IMMERSION**

01. Dip the flowers in the dyeing solution.
02. Let the stems dry for 2 hours
03. Flowers are ready to ship



Preparing dyeing solution for immersion:

- Mix water with alcohol to dissolve the dye product; the proportion is 60% Alcohol + 40% Water.
- Use a specific dyeing product for immersion (better to use liquid dye products).
- Strong colors: use 10 cc of dye product per liter. Light colors: use 3 to 5 cc of dye product per liter.

Tinting by Spraying

By spraying, you can reach pastel colors like purple, orange and light pink



How to tint by **SPRAYING**

01. Spray the head with the following products.
02. Make sure that you spray up to full cover of the head.
03. After spraying the flowers let the stems dry for 2 hours.

- **Aphids:** May appear throughout the year, treat with any locally available chemicals such as:
 - **Mospilan (*Acetamiprid* 200 grams/Liter)** applied at a 0.03% concentration and sprayed excessively until plants are dripping



Plant Protection - Diseases

- *Soil Fusarium*. Cultivate in sterilized soils only.
- If symptoms develop, carefully remove infected plants and treat with:
 - **Goldazim** (*Carbendazim* 50%) at a concentration of 0.1%, in a volume of 100 gal per acre
 - **Octave** (*Prochloraz Manganese* 50%) drenching the soil (spraying with a "shower head") at a concentration of 0.2%

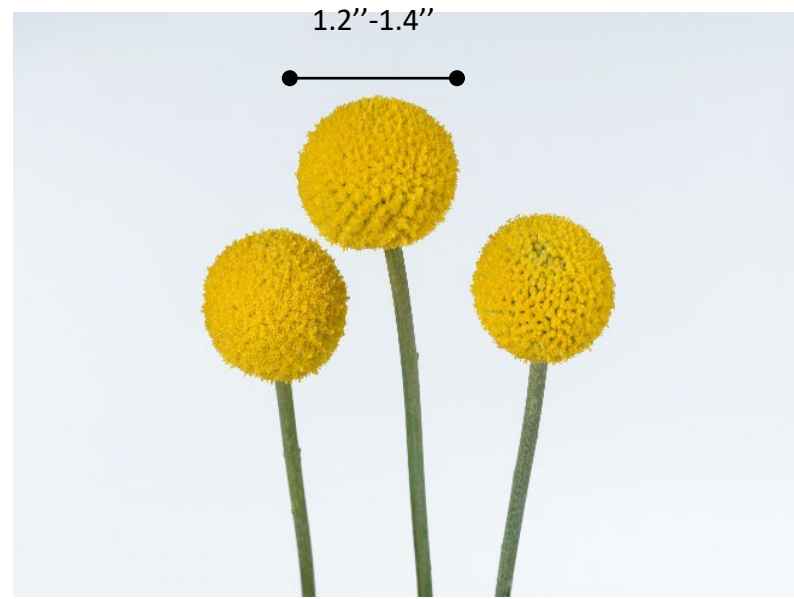


Inducing the 2nd flush

- It is possible to renew the plants for a new flush by cut-back to the ground as long as the temperatures are not too high (maximum 32°C, 90°F)
- A second flush can be achieved before the hot season
- Cut-back should be performed under a 50% shade net



The PAINTBALL™ Series



The PAINTBALL™ Series



PAINTBALL™ JUMBO



The PAINTBALL™ Series



PAINTBALL™ POPPY

- New variety, introduced in the 2021-2022 season
- Oblong flower-head shape
- Flower-head size: 1.2'' diameter, 1.6'' height
- Stem length: as much as 5'
- Very strong stems
- Very erect growth
- Easy to harvest
- Higher yield than other varieties
- More tolerant to Fusarium than other varieties





Thank you :)

Imagine more

